



US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

TOXIC SUBSTANCES CONTROL ACT

NOTICE OF INSPECTION

1. INVESTIGATION IDENTIFICATION			3. FACILITY NAME
DATE 5/23/2018	INSPECTOR'S NO. 10759	DAILY SEQ. NO. 1	Holley Performance Products
2. INSPECTOR'S ADDRESS KY DEP-DWM 625 Hospital Drive MADISONVILLE, KY 42431			4. FACILITY ADDRESS 1801 Russellville Road Bowling Green, KY 42101

For Internal EPA Use. Copies may be provided to recipient as acknowledgment of this notice.

REASON FOR INSPECTION

Under the authority of Section 11 of the Toxic Substances Control Act:

Q For the purpose of inspecting (including taking samples, photographs, statements, and other inspection activities) an establishment, facility, or other premises in which chemical substances or mixtures, articles containing same are manufactured, processed, stored or held before or after their distribution in commerce (including records, files, papers, processes, controls, and facilities) and any conveyances being used to transport chemical substances, mixtures, or articles containing same in connection with their distribution in commerce (including records, files, papers, processes, controls, and facilities) bearing on whether the requirements of the Act are applicable to the chemical substances, mixtures, or articles within, or associated with, such premise or conveyance have been complied with.

Q In addition, this inspection extends to (check appropriate blocks):

Q A. Financial data

Q D. Personnel data

Q B. Sales data

Q E. Research data

Q C. Pricing data



The nature and extent of inspection of such data specified in A through E above is as follows:

TSCA Sec 6 e

INSPECTOR'S SIGNATURE <i>Curtis Scott</i>		RECIPIENT'S SIGNATURE <i>Braden Morris</i>	
NAME <i>Curtis Scott</i>		NAME <i>Braden Morris</i>	
TITLE <i>Environmental Inspector</i>	DATE SIGNED <i>5/23/18</i>	TITLE <i>ETH</i>	DATE SIGNED

EPA FORM 7740-3 (REVISED JULY 1997) CORE TSCA — PREVIOUS VERSIONS ARE OBSOLETE

Recipient's COPY

		US ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460	
		TOXIC SUBSTANCES CONTROL ACT	
TSCA INSPECTION CONFIDENTIALITY NOTICE			
1. INVESTIGATION IDENTIFICATION		4. FACILITY NAME	
DATE 5/23/2018	INSPECTION NO. 10759	DAILY SEQ. NO. 1	Holley Performance Products
2. INSPECTOR'S NAME Curtis Scott		5. ADDRESS 1801 Russellville Rd, Bowling Green, KY 42101	
3. INSPECTOR'S ADDRESS KY DEP - DWM 625 Hospital Drive MADISONVILLE, KY 42431		6. NAME OF CHIEF EXECUTIVE OFFICER Terry Rutledge	
		7. TITLE EHS	
For Internal EPA use. Copies may be provided to recipient as acknowledgment of this notice.			
TO ASSERT A TSCA CONFIDENTIAL BUSINESS INFORMATION CLAIM			
<p>It is possible that EPA will receive public requests for release of the information obtained during the inspection of the facility cited above. Such requests will be handled by EPA in accordance with provisions of the Freedom of Information Act (FOIA), 5 USC 552; EPA regulations issued thereunder, 40 CFR, Part 2; and the Toxic Substances Control Act (TSCA), Section 14. EPA is required to make inspection data available in response to FOIA requests unless the EPA Administrator determines that the data is entitled to confidential treatment, or may be withheld from release under other exceptions of FOIA.</p> <p>Any or all information collected by EPA during the inspection may be claimed as confidential if it relates to trade secrets, commercial, or financial matters that you consider to be confidential business information (CBI). If you assert a CBI claim, EPA will disclose the information only to the extent, and by means of the procedures set forth in the regulations (cited above) governing EPA's treatment of CBI. Among other things, the regulations require that EPA notify you in advance of publicly disclosing any information claimed as CBI.</p> <p>A CBI claim may be asserted at any time prior to, during, or after the information is collected. This notice was developed by EPA to assist you in asserting a CBI claim. If it is more convenient for you to assert a CBI claim on your own stationary or by making the individual documents or samples "TSCA confidential business information," it is not necessary for you to use this notice. The Inspector will be glad to answer any questions you may have regarding EPA's CBI procedures.</p> <p>While you may claim any collected information or sample as CBI, such claims are not likely to be upheld if they are challenged unless the information meets the following criteria:</p>		<p>2. The information is not, and has not been, reasonably obtainable without your company's consent by other persons (other than governmental bodies), or by use of legitimate means (other than discovery based on showing of special need in a judicial or quasi-judicial proceeding).</p> <p>3. The information is not publicly available elsewhere.</p> <p>4. Disclosure of the information would cause substantial harm to your company's competitive position.</p> <p>At the completion of the inspection, you will be given a receipt for all documents, samples, and other materials collected. At that time, you may make claims that some or all of the information is CBI.</p> <p>If you are not authorized by your company to assert a CBI claim, this notice will be sent by certified mail, along with the receipt for documents, samples, and other materials to the Chief Executive Officer of your company within 2 days of this date. The Chief Executive Officer must return a statement specifying any information which should receive CBI treatment.</p> <p>The statement from the Chief Executive Officer should be addressed to: EPA Region 4 RCRA, 10th Floor, Attn Tammye Cross 303 Forsyth Street, Atlanta, GA. and mailed by registered, return-receipt requested mail within 7 calendar days of receipt of this notice. Claims may be made at any time after the inspection, but the inspection data will not be entered into the TSCA/CBI security system until an official confidentiality claim is made. The data will be handled under EPA's routine security system unless and until a claim is made.</p>	
<p>1. Your company has taken measures to protect the confidentiality of the information and it intends to continue to take such measures.</p>			
TO BE COMPLETED BY FACILITY OFFICIAL RECEIVING THIS NOTICE I acknowledge receipt of this notice:		If there is no one on the premise who is authorized to make CBI claims for this facility, a copy of this notice and other inspection materials will be sent to the company's Chief Executive Officer. If there is another official who should also receive this information, please designate below.	
SIGNATURE 		NAME	
NAME Braden Morris		TITLE	
TITLE EHS		ADDRESS	
DATE SIGNED			

EPA FORM 7740-4 (Revised July 1997) PREVIOUS VERSIONS ARE OBSOLETE

INSPECTOR'S COPY



U. S. Environmental Protection Agency Region 4
PCB and Chemical Products Management Section
61 Forsyth Street, SW
Atlanta, GA 30303

ICIS DATA ENTRY FORM
FEDERAL AND STATE COMPLIANCE MONITORING ACTIVITY

Page 1 of 2

☐
☒

EPA Inspection

State Inspection: KY
(Identify State)

FACILITY INFORMATION

ICIS Facility Programmatic ID (Data Entry Specialist use only):

Date Entered:

1. Facility Site Name (Official name no abbreviations)

Holley Performance Products

2. Address (no abbreviations)

1801 Russellville Road

3. City

Bowling Green

4. State

KY

5. Zip Code

42101

6. County

Warren

7. Primary SIC or NAICS Code
N/A

8. Environmental Justice (EPA use only)

☐
☐

Minority/Low Income

Low Income

☐

Minority

9. Tribal Land (Identify - EPA use only)

10. Small Business (PCB Facilities <100 employees)

☐
☒

Yes

No

11. Federal Agency (Describe)

12. Facility Ownership (Describe: e.g., Corporation, Individual, Federal, State, etc.)

Corporation

COMPLIANCE MONITORING INFORMATION

13. Compliance Monitoring Type (Check appropriate selection)

Inspection ☐ Federal ☒ State

Information Request (IRL) ☐ Federal (EPA Use Only)

(Data entry tip: In ICIS always enter "Federal" regardless of selection above.)

14. Statute

☐ FIFRA
☒ TSCA

15. Law Section(s) - (select all that apply)

PCBs

☒

TSCA 6: PCBs

(Data entry tip: Two TSCA 6 selections in ICIS, PCB is the second TSCA 6 selection)

Core TSCA

☐
☐
☐

TSCA 5:

TSCA 8: Existing Chemicals

TSCA 12:

TSCA 13:

FIFRA

☐
☐
☐
☐
☐
☐
☐

FIFRA 8: Establishment Registration

FIFRA 9: Establishment Registration

FIFRA 8: Labels, Reg. Issues, etc. (not Antimicrobial)

FIFRA 9: Labels, Reg. Issues, etc. (not Antimicrobial)

FIFRA 8: Recordkeeping

FIFRA 9: Recordkeeping

FIFRA 13: Stop Sale, Remove, and Seizure: Imports

16. Compliance Monitoring Category Comprehensive

17. Region Region 4

18. Compliance Monitoring Activity Name (For EPA data entry use only)

19. Compliance Monitoring Type - (select all that apply)

FIFRA

☐
☐
☐
☐
☐

Export

Import

Establishment: General Products

Establishment: Records

Establishment: Specific Product Review

TSCA

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☐

Premanufacture Notice

Significant New Use Rule

PCB

Inventory Rule

Export

Import

Information Request (IRL) (EPA use only)

☐
☐

Formal

Informal

(For TSCA always select Informal)

If one of these blocks is checked Sections 27 - 31
of this form are **NOT** to be completed.

INSPECTION DATES

20. Inspection Dates

Actual Start Date (Inspection)

5/23/2018

(If IRL, date IRL signed by management)

Actual End Date (Inspection)

5/23/2018

(If IRL, date IRL signed by management)

21. Compliance Monitoring Activity Reason

☒
☐

Core Program

Agency Priority

☐
☐

Citizen Tip/Complaint

For Cause

22. Compliance Monitoring Agency Type

☒
☐

State

U.S. EPA

(If State & EPA present or a
State only PCB Storage/Disp.
Facility inspection, check both)

23. If State lead, did EPA assist?

☐
☒

Yes

No



Facility Site Name (Repeat from page 1, Item 1)

Holley Performance Products

24. Was this a State, Federal or Joint Inspection?

- ☒ State
☐ Federal
☐ Joint (State/Federal)

25. If joint, what was the purpose of the participation of the other party?

- ☐ True Joint with EPA and State
☐ Oversight Purposes
☐ Training Purposes
☐ Assist State

26. Which party had the lead?

- ☐ State
☐ U.S. EPA

INSPECTION CONCLUSION DATA SHEET

(Sections 27-31 are NOT to be completed if an IRL)

27. Did you observe deficiencies during the on-site inspection?

☐ Yes ☒ No

If yes, check all deficiencies observed (potential failure to):

- ☐ complete or submit a notification, report, certification, or manifest
☐ follow a permit condition(s).
☐ follow a required sample monitoring procedure or lab procedure.
☐ follow or develop a required management practice or procedure.
☐ identify and manage a regulated waste or pollutant.

- ☐ maintain/inspect/repair equipment
☐ maintain a record.
☐ obtain a permit, product approval or certification.
☐ report regulated events such as spill, accidents, etc.
☐ Incorrect use of material or use of unapproved material.
☐ Violation of a compliance schedule in a compliance order.

28. If you observed deficiencies, did you communicate them to the Facility during the inspection?

☐ Yes ☐ No

29. Did you observe the Facility take any actions during the inspection to address the deficiencies noted?

☐ Yes ☐ No

If yes, check all actions were taken:

- ☐ Correct(ed) Record Keeping Deficiencies
☐ Correct(ed) Monitoring Deficiencies
☐ Correct(ed) a Notification or Report
☐ Implemented New or Improved Management Practices or Procedures
☐ Improved Pollutant Identification (i.e., Labeling, Manifesting, Storage, etc.)
☐ Reduced Pollution

30. Did you provide Compliance Assistance (i.e., general assistance with the requirements of the regulations)?

☐ Yes ☒ No

31. Did you provide site-specific Compliance Assistance (i.e., specific details on what the facility needs to do to comply)?

☐ Yes ☒ No

PRIORITIES

32. National Priority

- ☐ 2007 - Tribal
☐ 2007 - Mineral Processing: Mining
☐ 2007 - Mineral Processing: Non- Phosphoric Acid
☐ 2007 - Mineral Processing: Phosphoric Acid
☐ 2007 - Petroleum Refining

33. Regional Priority

NA

COMPLIANCE MONITORING MEDIA INDICATOR

34. Multimedia (EPA use only)

☐ Check box if this was a multimedia inspection

INSPECTOR COMMENTS

Inspector Comments: 2018 Grant site

USER DEFINED FIELDS

36. User Defined Field Number 2

☐

(Check box if a PCB Storage or Disposal facility inspection) (Data Entry Tip: If checked, type ACS in Field 2)

CONTACTS

37. Inspector First Name

Inspector Last Name

Affiliation

(Identify State if a State Inspector)

	Inspector First Name	Inspector Last Name	Affiliation	(Identify State if a State Inspector)
1.	Curtis	Scott	<input type="checkbox"/> EPA	<input checked="" type="checkbox"/> State: KY
2.			<input type="checkbox"/> EPA	State:
3.			<input type="checkbox"/> EPA	State:
4.			<input type="checkbox"/> EPA	State:
5.			<input type="checkbox"/> EPA	State:

SUB ACTIVITIES (EPA use only)

38. Date State Inspection Report Received

39. Date IRL Response Received



MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

AARON KEATLEY
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

May 29, 2018

Holley Performance Products
Attn: Brandon Morris
1801 Russellville Road
Bowling Green, KY 42101

RE: Inspection Results
Holley Performance Products
Warren County
AI# 4116

Dear Mr. Morris:

Enclosed for your review is a copy of the TSCA Inspection Report for the inspection conducted at Holley Performance Products on 5/23/2018. Please review this inspection report and take note of any comments that are listed. A copy of this report has been mailed to EPA, Region 4 for their review.

If you have questions or need further information or assistance, feel free to contact this office at the above address or call 270-824-7532.

Sincerely,

Curtis Scott
Environmental Inspector
KY Department for Environmental Protection
Division of Waste Management

Enclosure: TSCA Section 6(e) Inspection Report

TSCA Section 6(e) PCB Inspection

5/23/2018

Holley Performance Products
1801 Russellville Road
Bowling Green, KY 42101
Warren County

PARENT COMPANY

Same as above.

SUMMARY

This is a TSCA Section 6 (e) PCB Neutral Scheme Selection Inspection. The facility was constructed and production operations began at this location prior to the enactment of TSCA regulations. The facility has nineteen oil filled transformers. All of the transformers are non-PCB. The facility maintains oil sample analysis for each unit verifying the non-PCB status. Multiple pieces of production machinery contain small internal dry-type transformers. No fluid filled capacitors are owned by the facility. No PCB or PCB-Contaminated equipment or fluids are known to be owned by the facility or located at the facility. Records indicating the disposal and management of historic transformers were not observed during the inspection. In 1992 three PCB-Contaminated GE transformers were retro-filled with new oil, and subsequent oil analysis indicate 4 to 8 ppm PCB. The oldest records observed during the inspection were oil analysis dating from 1986 on several units that indicate non-detectable levels of PCBs.

PERSONS INTERVIEWED

On May 23, 2018, KY DEP Madisonville Regional Office Inspector, Curtis Scott met with Brandon Morris, EHS and Brad Murphy, Maintenance Manager, at the facility. During the opening conference, EPA credentials were presented, and both the Notice of Inspection and the Confidentiality Notice were completed.

HISTORY OF BUSINESS

The facility was constructed in the 1950s era and has been owned and operated by Holley Performance Products since then. Holley Performance Products manufactures carburetors and components related to motorized fuel injection and combustion systems. The facility is approximately 195,000 square feet (under roof), and the facility has approximately 200 employees. The facility operates 24/7 and has security on-site during the holidays. In addition to the production operations, this facility serves as the corporate office.

TRANSFORMERS

Three 500 KVA GE transformers on east side of property. All are documented to be non-PCB. These three units were PCB-Contaminated in 1992 (164 to 243 ppm). They were retro-filled in 1992. Subsequent post retro-fill oil PCB analysis indicated 4 ppm to 6 ppm in 1993 and 6 ppm to 8 ppm in 2008.

Three 500 KVA Moloney transformers on west side of property. All are documented to be non-PCB.

One 2,500 KVA GE transformer on west side of property. It is documented to be non-PCB.

One 225 KVA Solomon transformer on east side of property. It is documented to be non-PCB.

Three 333 KVA Cooper transformers on north side of property. All are documented to be non-PCB.

One 1,000 KVA Solomon transformer on south side of property. It is documented to be non-PCB.

Three 500 KVA Westinghouse transformers on the southeast corner of property. All are documented to be non-PCB.

One 1,500 KVA Maloney transformer on the southeast corner of property. It is documented to be non-PCB.

Three 500 KVA Westinghouse transformers on the southeast corner of property. All are documented to be non-PCB.

CAPACITORS

No PCB or PCB Contaminated Capacitors were observed or reported to be owned by the facility.

USE

No PCB transformers, capacitors, or other equipment is known to be in-use at this facility.

RECORDS

No records associated with the TSCA program are maintained by this facility as all equipment is non-PCB. The facility contracts SD Myers to perform annual oil sampling analysis on each transformer in their inventory. Each of the nineteen transformers have PCB concentrations that are non-detectable levels except for three 500 KVA units that were retro-filled in 1993. These three units had a concentration of 6 to 8 ppm PCB in 2008. All transformers are labeled and managed as non-PCB.

MARKING

All transformers are labeled and managed as non-PCB.

STORAGE

The facility does not maintain a storage unit for PCB or PCB-Contaminated equipment. This facility is registered as a RCRA Large Quantity Generator of Hazardous Waste. The facility maintains a central storage area for Hazardous Wastes. According to Brandon Morris, EHS, if the facility was to ever locate any PCB or PCB-Contaminated equipment, they would store it in the central storage area until disposed.

SAMPLES TAKEN

No samples were taken by KY DEP.

OTHER ELECTRICAL EQUIPMENT

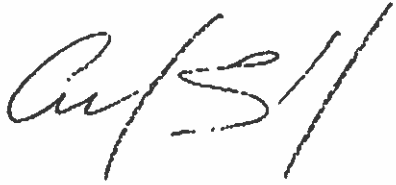
None

LEAKING EQUIPMENT

No leaking transformers or other types of electrical equipment was observed or reported to be leaking.

SPILLS

No spills were observed.

A handwritten signature in black ink, appearing to read 'Curtis Scott'.

Curtis Scott
Environmental Inspector
Kentucky Department for Environmental Protection
Division of Waste Management

Customer 1952800 Holley Automotive
Sub-Name SUB #1

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other EAST

NAMEPLATE DATA

Manufacturer	GENERAL ELECTRIC	Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	OA
Serial No.	8326543	Impedance %	5 20
KVA Rating	500	Phase/Cycle	1/60
High Voltage	13,200	Liquid Type	OIL
Low Voltage	240	Gallons	270
Weight	5,800	Other Access	TOP INSPECTION PLATE

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	No
Fans	No	LTC Compartment	No
Water Cooled	No	Bushing Location	Top and Side
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)	0.25 Plug	Hose Length (feet)	50
Bottom FPV (Inch)	1.00 Valve	Service Online	No
InsulationType	55C	Power Available	Yes

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
04/01/14	NORMAL	25	33		FAIR	NONE
05/06/15	NORMAL	37	39		FAIR	NONE
02/09/17	NORMAL		10		POOR	NONE
03/02/18		14	19		POOR	NONE

FIELD SERVICE

DATE	SERVICE
07/15/79	RE-REFINE / RECLAIM
04/15/93	REPAIRS
04/15/93	RETROFILL

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
08/19/05		0.030 AC	38.1 AC	42 AC			2.00 AC	0.875 AC	CLEAR AC	NONE AC
08/11/08		0.040 AC	37.9 AC	44 AC			1.50 AC	0.870 AC	CLEAR AC	NONE AC
08/15/11		0.050 AC	38.3 AC	38 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.050 AC	38.1 AC	47 AC			2.00 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.050 AC	37.2 AC	45 AC			2.00 AC	0.885 AC	CLEAR AC	NONE AC
05/06/15		0.040 AC	36.9 AC	42 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
02/09/17		0.040 AC	36.2 AC	49 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
03/02/18		0.050 AC	36.0 AC	43 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/10/12	0.400% AC
04/01/14	0.406% AC
05/06/15	0.417% AC
02/09/17	0.416% AC
03/02/18	0.384% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/10/12	0.037 AC	0.616 AC
04/01/14	0.024 AC	0.478 AC
05/06/15	0.027 AC	0.545 AC
02/09/17	0.018 AC	0.607 AC
03/02/18	0.016 AC	0.598 AC

KEY TO ABBREVIATIONS AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #1
Location OUTDOOR/GROUND

S/N B326543
Mfg. GENERAL ELECTRIC
Unit No.

Gallons 270
KVA 500

High Volt. 13,200
Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	32	12	12.8 AC	1.36
08/10/12	31	14	16.3 QU	1.74
04/01/14	30	10	12.1 AC	1.30
05/06/15	42	11	8.1 AC	0.68
02/09/17	11	7	17.4 QU	2.08
03/02/18	19	7	13.2 AC	1.60

RECOMMENDATION RETEST 1 YEAR

The moisture content has decreased since our last analysis. If service has not been performed, this may be due to temperature and/or operational changes. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
08/15/11	ND	ND	8	ND	ND	8
08/10/12	ND	ND	5	ND	ND	5
04/01/14	ND	ND	17	ND	ND	17
05/06/15	ND	ND	30	ND	ND	30
02/09/17	ND	ND	20	ND	ND	20
03/02/18	ND	ND	24	ND	ND	24

RECOMMENDATION RETEST 1 YEAR

NO DIAGNOSTIC CHANGES ARE NOTED IN FURAN LEVELS SINCE THE PREVIOUS ANALYSIS. THE CELLULOSIC INSULATION APPEARS TO BE IN GOOD CONDITION.

CALCULATED DP 800

EST. LIFE REMAINING 100%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	5	19,811	61,738	3	352	3,459	3	78	ND	441	85,249
08/11/08	ND	22,520	64,348	4	283	3,485	2	109	ND	398	90,751
08/15/11	6	13,430	58,356	7	504	6,156	5	245	ND	767	78,709
08/10/12	6	15,696	72,325	7	870	7,498	5	305	ND	993	96,512
04/01/14	9	9,832	62,672	9	757	6,532	6	311	ND	1,092	79,928
05/06/15	15	11,501	64,314	7	800	5,484	6	320	ND	1,148	82,447
02/09/17	11	16,432	74,653	11	761	5,424	9	379	ND	1,171	97,680
03/02/18	ND	8,943	62,511	10	889	7,302	8	518	ND	1,425	80,181

RECOMMENDATION RETEST 1 MONTH

D-ELEVATED LEVELS OF METHANE, ETHANE, AND ETHYLENE INDICATE AN INTERNAL HOT SPOT IN THE RANGE OF 300-700 DEGREES C. POSSIBLE CAUSES INCLUDE A BAD OR LOOSE INTERNAL CONNECTION OR LOCALIZED OVERHEATING IN THE TAP CHANGER AREA.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
09/19/05	ND	ND	ND
08/11/08	ND	ND	ND
08/15/11	ND	ND	ND
08/10/12	ND	ND	ND
04/01/14	ND	ND	ND
05/06/15	ND	ND	ND
02/09/17	ND	ND	ND
03/02/18	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
09/15/79					ND
11/07/86	41		123		164
11/05/92	42		155		197
09/01/93			6		6
08/11/08			7		7

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
ND means None Detected
(<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #1

 City Bowling Green, KY
 Unit No.

 Location OUTDOOR/GROUND
 Other CENTER

NAMEPLATE DATA
ADDITIONAL EQUIPMENT

Manufacturer	GENERAL ELECTRIC	Equipment Type	TRANSFORMER	Radiators	Yes	Conservator Tank	No
Manufacture Date		Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	B326544	Impedance %	5.20	Water Cooled	No	Bushing Location	Top and Side
KVA Rating	500	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	13.200	Liquid Type	OIL	Top FPV (Inch)	0.25 Plug	Hose Length (feet)	20
Low Voltage	240	Gallons	270	Bottom FPV (Inch)	1.00 Valve	Service Online	No
Weight	5 800	Other Access	TOP INSPECTION PLATE	InsulationType	55C	Power Available	Yes

VISUAL INSPECTION
FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14	NORMAL	23	32		FAIR	NONE	12/15/82	RE-REFINE / RECLAIM
05/06/15	NORMAL	36	38		FAIR	NONE	04/15/93	REPAIRS
02/09/17	LOW		10		POOR	NONE	04/15/93	RETROFILL
03/02/18	NORMAL	12	15		FAIR	NONE		

Additional Information
Reason Not Tested
LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
09/19/05		0.030 AC	37.6 AC	44 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/11/08		0.030 AC	37.8 AC	49 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/15/11		0.040 AC	37.4 AC	43 AC			2.00 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.030 AC	37.4 AC	51 AC			2.00 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.030 AC	37.0 AC	42 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
05/06/15		0.030 AC	36.7 AC	51 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
02/09/17		0.030 AC	35.8 AC	60 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
03/02/18		0.040 AC	36.4 AC	46 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/10/12	0.434% AC
04/01/14	0.447% AC
05/06/15	0.461% AC
02/09/17	0.452% AC
03/02/18	0.420% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/10/12	0.030 AC	0.634 AC
04/01/14	0.022 AC	0.379 AC
05/06/15	0.025 AC	0.391 AC
02/09/17	0.013 AC	0.210 AC
03/02/18	0.011 AC	0.349 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive

S/N 8326544

Sub-Name SUB #1

Mfg. GENERAL ELECTRIC

Location OUTDOOR/GROUND

Unit No.

Gallons 270
KVA 500

High Volt. 13,200
Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	31	10	11.6 AC	1.24
08/10/12	31	10	11.6 AC	1.24
04/01/14	28	3	3.9 AC	0.44
05/06/15	41	8	6.0 AC	0.51
02/09/17	9	5	14.7 AC	1.70
03/02/18	17	2	4.1 AC	0.50

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
08/15/11	ND	ND	10	ND	ND	10
08/10/12	ND	ND	10	ND	ND	10
04/01/14	ND	ND	15	ND	3	18
05/06/15	ND	ND	25	ND	ND	25
02/09/17	ND	ND	19	ND	ND	19
03/02/18	ND	ND	21	ND	ND	21

RECOMMENDATION RETEST 1 YEAR

NO DIAGNOSTIC CHANGES ARE NOTED IN FURAN LEVELS SINCE THE PREVIOUS ANALYSIS. THE CELLULOSIC INSULATION APPEARS TO BE IN GOOD CONDITION.

CALCULATED DP 800 EST. LIFE REMAINING 100%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	32	3,009	80,324	22	1,052	3,475	8	79	ND	1,193	88,001
08/11/08	13	11,650	83,555	9	580	3,144	4	45	ND	651	99,000
08/15/11	12	6,616	68,832	23	1,115	6,996	15	109	ND	1,274	83,718
08/10/12	12	7,412	72,051	22	1,165	7,858	14	123	ND	1,336	88,657
04/01/14	18	6,186	64,663	28	1,132	6,658	15	110	ND	1,303	79,810
05/06/15	4	8,379	66,814	20	1,037	5,367	13	112	ND	1,186	81,746
02/09/17	10	14,065	72,752	25	839	4,812	15	119	ND	1,008	92,637
03/02/18	27	7,178	60,731	27	888	6,498	22	161	ND	1,125	75,532

RECOMMENDATION RETEST 1 MONTH

D-ELEVATED LEVELS OF METHANE, ETHANE, AND ETHYLENE INDICATE AN INTERNAL HOT SPOT IN THE RANGE OF 300-700 DEGREES C. POSSIBLE CAUSES INCLUDE A BAD OR LOOSE INTERNAL CONNECTION OR LOCALIZED OVERHEATING IN THE TAP CHANGER AREA.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
09/19/05	ND	ND	ND
08/11/08	ND	ND	ND
08/15/11	ND	ND	ND
08/10/12	ND	ND	ND
04/01/14	ND	ND	ND
05/06/15	ND	ND	ND
02/09/17	ND	ND	ND
03/02/18	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
12/03/82	10		43		53
11/07/86	35		144		179
11/05/92	34		133		167
09/01/93			6		6
08/11/08			8		8

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
ND means None Detected
(<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #1

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other WEST

NAMEPLATE DATA

Manufacturer	GENERAL ELECTRIC	Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	OA
Serial No.	8326542	Impedance %	5.20
KVA Rating	500	Phase/Cycle	1/60
High Voltage	13,200	Liquid Type	OIL
Low Voltage	240	Gallons	270
Weight	5,800	Other Access	TOP INSPECTION PLATE

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	No
Fans	No	LTC Compartment	No
Water Cooled	No	Bushing Location	Top and Side
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)	0.25 Plug	Hose Length (feet)	20
Bottom FPV (Inch)	1.00 Valve	Service Online	No
InsulationType	55C	Power Available	Yes

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
04/01/14	NORMAL	24	32		FAIR	NONE
05/06/15	NORMAL	36	38		FAIR	NONE
02/09/17	LOW		9		POOR	NONE
03/02/18	NORMAL	11	16		FAIR	NONE

FIELD SERVICE

DATE	SERVICE
12/15/82	RE-REFINE / RECLAIM
04/15/93	REPAIRS
04/15/93	RETROFILL

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
09/19/05		0.030 AC	39.5 AC	43 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/11/08		0.030 AC	38.6 AC	47 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/15/11		0.040 AC	38.1 AC	43 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.050 AC	37.8 AC	57 AC			2.00 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.050 AC	37.4 AC	47 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
05/06/15		0.040 AC	37.5 AC	49 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
02/09/17		0.040 AC	36.8 AC	49 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
03/02/18		0.040 AC	36.1 AC	41 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/10/12	0.395% AC
04/01/14	0.401% AC
05/06/15	0.415% AC
02/09/17	0.416% AC
03/02/18	0.378% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/10/12	0.020 AC	0.408 AC
04/01/14	0.020 AC	0.345 AC
05/06/15	0.022 AC	0.372 AC
02/09/17	0.014 AC	0.445 AC
03/02/18	0.013 AC	0.374 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #1
 Location OUTDOOR/GROUND

S/N 8326542
 Mfg. GENERAL ELECTRIC
 Unit No.

Gallons 270
 KVA 500

High Volt. 13,200
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	31	14	15.7 QU	1.67
08/10/12	31	12	13.4 AC	1.43
04/01/14	29	4	5.0 AC	0.55
05/06/15	41	7	5.6 AC	0.48
02/09/17	9	4	11.7 AC	1.36
03/02/18	16	3	6.5 AC	0.78

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
08/15/11	ND	ND	8	ND	ND	8
08/10/12	ND	ND	8	ND	ND	8
04/01/14	ND	ND	14	ND	ND	14
05/06/15	ND	ND	30	ND	ND	30
02/09/17	ND	ND	25	ND	ND	25
03/02/18	ND	ND	29	ND	ND	29

RECOMMENDATION RETEST 1 YEAR

NO DIAGNOSTIC CHANGES ARE NOTED IN FURAN LEVELS SINCE THE PREVIOUS ANALYSIS. THE CELLULOSIC INSULATION APPEARS TO BE IN GOOD CONDITION.

CALCULATED DP 800

EST. LIFE REMAINING 100%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	35	7,723	77,848	76	965	3,791	40	271	6	1,393	90,755
08/11/08	26	6,348	80,397	65	1,050	5,373	28	213	ND	1,382	93,500
08/15/11	16	8,479	64,688	67	1,017	8,602	49	328	ND	1,477	83,246
08/10/12	15	9,339	70,254	68	1,113	9,502	56	361	ND	1,613	90,708
04/01/14	18	8,049	65,758	75	1,101	8,180	56	342	ND	1,592	83,579
05/06/15	8	9,727	57,318	48	800	6,397	47	321	ND	1,224	74,666
02/09/17	10	17,627	80,487	57	875	5,980	44	358	ND	1,342	105,436
03/02/18	16	9,366	62,905	64	921	6,346	65	484	ND	1,550	82,167

RECOMMENDATION RETEST 1 MONTH

D-ELEVATED LEVELS OF METHANE, ETHANE, AND ETHYLENE INDICATE AN INTERNAL HOT SPOT IN THE RANGE OF 300-700 DEGREES C. POSSIBLE CAUSES INCLUDE A BAD OR LOOSE INTERNAL CONNECTION OR LOCALIZED OVERHEATING IN THE TAP CHANGER AREA.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
09/19/05	ND	ND	ND
08/11/08	ND	ND	ND
08/15/11	ND	ND	ND
08/10/12	ND	ND	ND
04/01/14	ND	ND	ND
05/06/15	ND	ND	ND
02/09/17	ND	ND	ND
03/02/18	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
12/03/82	26		88		114
11/07/86	40		188		228
11/05/92	54		189		243
09/01/93			4		4
08/11/08			6		6

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.



INTELLIGENT TRANSFORMER MANAGEMENT

Date Printed 5/23/2018

TC# 4

Customer 1952800 Holley Automotive
Sub-Name #2City Bowling Green, KY
Unit No.Location OUTDOOR
Other

3 ft

NAMEPLATE DATA

Manufacturer	CENTRAL MALONEY	Equipment Type	CABINET XFRMR
Manufacture Date	1/1/1973	Transformer Class	OA
Serial No.	1732611-1	Impedance %	5.60
KVA Rating	1,500	Phase/Cycle	3/50
High Voltage	12,470	Liquid Type	OIL
Low Voltage	480	Gallons	477
Weight	12,633	Other Access	

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	No
Fans	No	LTC Compartment	No
Water Cooled	No	Bushing Location	Side Encl
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)	0 50 Plug	Hose Length (feet)	100
Bottom FPV (Inch)	1 00 Valve	Service Online	No
InsulationType	65C	Power Available	No

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT FAIR	LEAKS YES-SEC BUSHINGS
06/07/15						
06/07/15						
05/15/18	NORMAL					NONE *

FIELD SERVICE

DATE	SERVICE
05/15/18	REPAIRS

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
06/07/15		0.020 AC	38.2 AC	40 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
06/07/15	0.210% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
06/07/15	0.041 AC	1.307 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name #2
 Location OUTDOOR

S/N 1732611-1
 Mfg. CENTRAL MALONEY
 Unit No.

Gallons 477
 KVA 1,500

High Volt. 12,470
 Low Volt. 480

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
06/07/15	38	8	7.1 AC	0.65

RECOMMENDATION RETEST 1 YEAR

The moisture content in this base line data is acceptable based on the equipment class and liquid type. Normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
06/07/15	ND	ND	17	ND	ND	17

RECOMMENDATION RETEST 1 YEAR

THESE BASELINE DATA INDICATE THE CELLULOSIC INSULATION IS IN GOOD CONDITION.

CALCULATED DP 800 EST. LIFE REMAINING 100%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
06/07/15	2	8,984	61,900	22	616	7,106	17	24	ND	681	78,671

RECOMMENDATION RETEST 6 MONTHS

ELEVATED LEVELS OF CARBON MONOXIDE AND/OR CARBON DIOXIDE INDICATE THE CELLULOSIC INSULATION MAY HAVE BEEN OVERHEATED OR IS DETERIORATING. POSSIBLE CAUSES INCLUDE OVERLOADING THE UNIT FOR EXTENDED PERIODS OF TIME, INEFFECTIVE COOLERS, AND OXIDATION. IF APPLICABLE, FURAN RESULTS SHOULD BE CONSULTED TO AID DIAGNOSIS.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
06/07/15	ND	ND	0.065

RECOMMENDATION RETEST 1 YEAR

THERE ARE NO DIAGNOSTIC LEVELS OF METALS IN THIS SAMPLE. THESE DATA CAN SERVE AS A BASELINE FOR FUTURE ANALYSES.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
06/07/15					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #2

 City Bowling Green, KY
 Unit No.

 Location OUTDOOR/GROUND
 Other

NAMEPLATE DATA

Manufacturer	WESTINGHOUSE	Equipment Type	POP TOP XFRMR
Manufacture Date		Transformer Class	OA
Serial No.	82A042632	Impedance %	2.10
KVA Rating	500	Phase/Cycle	1/60
High Voltage	14,400	Liquid Type	OIL
Low Voltage	240	Gallons	
Weight	3 002	Other Access	TOP INSPECTION PLATE

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	No
Fans	No	LTC Compartment	No
Water Cooled	No	Bushing Location	Top and Side
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)		Hose Length (feet)	
Bottom FPV (Inch)		Service Online	No
InsulationType	85C	Power Available	No

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
05/06/15		35			FAR	NONE

FIELD SERVICE

DATE	SERVICE
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Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
05/06/15		0.030 AC	38.8 AC	45 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
05/06/15	0.232%

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
05/06/15	0.016 AC	0.290 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #2
 Location OUTDOOR/GROUND

S/N 82AD42632
 Mfg. WESTINGHOUSE
 Unit No.

Gallons
 KVA 500

High Volt. 14,400
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
05/06/15	40	7	5.8 AC	0.50

RECOMMENDATION RETEST 1 YEAR

The moisture content in this baseline data is acceptable based on the equipment class and liquid type. Normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
05/06/15	ND	ND	45	ND	ND	45

RECOMMENDATION RETEST 1 YEAR

THESE BASELINE DATA INDICATE THE CELLULOSIC INSULATION IS IN GOOD CONDITION.

CALCULATED DP 800 EST. LIFE REMAINING 100%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
05/06/15	ND	21.219	57.233	1	23	1.121	ND	ND	ND	24	79,597

RECOMMENDATION RETEST 1 YEAR

A-THE ANALYSIS OF THIS SAMPLE SHOWS ONLY MINOR AMOUNTS OF COMBUSTIBLE GAS. THIS BASELINE INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
05/06/15	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE ARE NO DIAGNOSTIC LEVELS OF METALS IN THIS SAMPLE. THESE DATA CAN SERVE AS A BASELINE FOR FUTURE ANALYSES.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #2

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other

NAMEPLATE DATA

Manufacturer	WESTINGHOUSE	Equipment Type	POP TOP XFRMR
Manufacture Date		Transformer Class	OA
Serial No.	82A042633	Impedance %	2.60
KVA Rating	500	Phase/Cycle	1/60
High Voltage	14,400	Liquid Type	OIL
Low Voltage	240	Gallons	
Weight	3,002	Other Access	TOP INSPECTION PLATE

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	No
Fans	No	LTC Compartment	No
Water Cooled	No	Bushing Location	Side Encl.
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)		Hose Length (feet)	100
Bottom FPV (Inch)		Service Online	No
InsulationType	85C	Power Available	No

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
05/06/15		35			FAIR	NONE

FIELD SERVICE

DATE	SERVICE
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Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
05/06/15		0.030 AC	39.4 AC	44 AC			1.45 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
05/06/15	0.233%

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
05/06/15	0.014 AC	0.241 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #2
Location OUTDOOR/GROUND

S/N 82A042633
Mfg. WESTINGHOUSE
Unit No.

Gallons
KVA 500

High Volt. 14,400
Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
05/06/15	40	6	5.0 AC	0.43

RECOMMENDATION RETEST 1 YEAR

The moisture content in this baseline data is acceptable based on the equipment class and liquid type. Normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
05/06/15	ND	ND	50	ND	ND	50

RECOMMENDATION RETEST 1 YEAR

THESE BASELINE DATA INDICATE THE CELLULOSIC INSULATION IS IN GOOD CONDITION.

CALCULATED DP 800 **EST. LIFE REMAINING** 100%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
05/06/15	ND	18.837	54.801	6	357	4.128	20	2	ND	385	76.151

RECOMMENDATION RETEST 1 YEAR

A-THE ANALYSIS OF THIS SAMPLE SHOWS ONLY MINOR AMOUNTS OF COMBUSTIBLE GAS. THIS BASELINE INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
05/06/15	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE ARE NO DIAGNOSTIC LEVELS OF METALS IN THIS SAMPLE. THESE DATA CAN SERVE AS A BASELINE FOR FUTURE ANALYSES.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #2

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other

NAMEPLATE DATA

ADDITIONAL EQUIPMENT

Manufacturer	WESTINGHOUSE	Equipment Type	POP TOP XFRMR	Radiators	Conservator Tank	No
Manufacture Date		Transformer Class	OA	Fans	LTC Compartment	
Serial No.	82A042634	Impedance %	2.00	Water Cooled	Bushing Location	Side End
KVA Rating	500	Phase/Cycle	1/60	Oil Pumps	Breather	N2 Blanket
High Voltage	14,400	Liquid Type	OIL	Top FPV (Inch)	Hose Length (feet)	100
Low Voltage	240	Gallons		Bottom FPV (Inch)	Service Online	No
Weight	3 002	Other Access	TOP INSPECTION PLATE	InsulationType	Power Available	No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT FAIR	LEAKS NONE	DATE	SERVICE
05/06/15		36						

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
05/06/15		0.030 AC	40.0 AC	45 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
05/06/15	0.225%

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
05/06/15	0.012 AC	0.175 AC

KEY TO ABBREVIATIONS AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.



Customer 1932500 Holley Automotive
 Sub-Name SUB #2
 Location OUTDOOR/GROUND

S/N 82A042634
 Mfg. WESTINGHOUSE
 Unit No.

Gallons
 KVA 500

High Volt. 14,400
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
05/06/15	41	15	11.8 AC	1.02

RECOMMENDATION RETEST 1 YEAR

The moisture content in this baseline data is acceptable based on the equipment class and liquid type. Normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
05/06/15	ND	ND	189	ND	ND	189

RECOMMENDATION RETEST 6 MONTHS

THESE BASELINE DATA INDICATE THE CELLULOSIC INSULATION IS IN GOOD CONDITION.

CALCULATED DP 605 EST. LIFE REMAINING 80%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
05/06/15	ND	20.719	56.880	2	24	1.532	ND	ND	ND	28	79,157

RECOMMENDATION RETEST 1 YEAR

A-THE ANALYSIS OF THIS SAMPLE SHOWS ONLY MINOR AMOUNTS OF COMBUSTIBLE GAS THIS BASELINE INDICATES NORMAL OPERATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
05/06/15	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE ARE NO DIAGNOSTIC LEVELS OF METALS IN THIS SAMPLE THESE DATA CAN SERVE AS A BASELINE FOR FUTURE ANALYSES

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1052800 Holley Automotive
Sub-Name SUB #4

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other WEST

NAMEPLATE DATA

ADDITIONAL EQUIPMENT

Manufacturer	(CENTRAL) MOLOONE	Equipment Type	POP TOP XFRMR	Radiators	Yes	Conservator Tank	No
Manufacture Date		Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	17813783	Impedance %	2.20	Water Cooled	No	Bushing Location	Top and Side
KVA Rating	500	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	13,200	Liquid Type	OIL	Top FPV (Inch)	0.50	Hose Length (feet)	20
Low Voltage	240	Gallons	102	Bottom FPV (Inch)		Service Online	No
Weight	3.178	Other Access	TOP INSPECTION PLATE	InsulationType	65C	Power Available	No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14		27			FAIR	NONE		
05/06/15		35			POOR	NONE		
02/09/17		8			POOR	NONE		
03/02/18		17			POOR	NONE		

Additional Information 8/15/2011 NO GAUGES

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
09/19/05		0.030 AC	38.6 AC	43 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/11/08		0.030 AC	38.4 AC	46 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
08/15/11		0.030 AC	37.9 AC	42 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.020 AC	37.8 AC	57 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.030 AC	36.3 AC	46 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
05/06/15		0.030 AC	35.9 AC	45 AC			2.00 AC	0.885 AC	CLEAR AC	NONE AC
02/09/17		0.030 AC	37.6 AC	55 AC			2.00 AC	0.890 AC	CLEAR AC	NONE AC
03/02/18		0.030 AC	37.0 AC	41 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/10/12	0.104% QU
04/01/14	0.108% QU
05/06/15	0.115% QU
02/09/17	0.115% QU
03/02/18	0.104% QU

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED

LIQUID POWER FACTOR

DATE	25 C	100 C
08/10/12	0.058 AC	1.113 AC
04/01/14	0.060 AC	1.189 AC
05/06/15	0.054 AC	1.029 AC
02/09/17	0.038 AC	0.706 AC
03/02/18	0.043 AC	0.643 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #4
 Location OUTDOOR/GROUND

S/N 17813783
 Mfg. (CENTRAL) MOLONE
 Unit No.

Gallons 102
 KVA 500

High Volt. 13 200
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	31	10	11.5 AC	1.24
08/10/12	33	7	7.5 AC	0.78
04/01/14	32	4	4.5 AC	0.47
05/06/15	40	7	5.4 AC	0.46
02/09/17	13	2	4.9 AC	0.60
03/02/18	22	3	4.2 AC	0.49

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	8	21,710	67,778	13	393	3,582	8	8	ND	428	93,488
08/11/08	9	22,203	68,106	10	384	5,529	4	5	ND	412	96,250
08/15/11	ND	13,963	53,119	13	425	6,994	15	7	ND	460	74,536
08/10/12	ND	17,192	61,613	11	417	7,681	8	7	ND	443	86,929
04/01/14	ND	13,098	59,020	14	384	6,106	7	8	ND	413	78,837
05/06/15	ND	17,292	61,982	12	444	5,158	6	7	ND	469	84,901
02/09/17	ND	24,027	76,724	13	398	4,685	7	7	ND	425	105,861
03/02/18	ND	13,433	48,760	11	421	5,373	8	6	ND	446	66,012

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
09/19/05	ND	ND	ND
08/11/08	ND	ND	0.034
08/15/11	ND	ND	ND
08/10/12	ND	ND	ND
04/01/14	ND	ND	ND
05/06/15	ND	ND	ND
02/09/17	ND	ND	ND
03/02/18	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
11/07/86					ND
11/05/92					ND
08/11/08					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source



INTELLIGENT TRANSFORMER MANAGEMENT

Date Printed 5/23/2018

TC# 15

Customer 1952800 Holley Automotive

City Bowling Green KY

Location OUTDOOR/GROUND

Sub-Name SUB #4

Unit No.

Other

CENTER

NAMEPLATE DATA

ADDITIONAL EQUIPMENT

Manufacturer	(CENTRAL) MOLONE	Equipment Type	POP TOP XFRMR	Radiators	Yes	Conservator Tank	No
Manufacture Date		Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	17813782	Impedance %	2.20	Water Cooled	No	Bushing Location	Top and Side
KVA Rating	500	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	13.200	Liquid Type	OIL	Top FPV (inch)	0.50	Hose Length (feet)	20
Low Voltage	240	Gallons	102	Bottom FPV (inch)		Service Online	No
Weight	3.178	Other Access	TOP INSPECTION PLATE	InsulationType	65C	Power Available	No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14		26			FAIR	NONE		
05/06/15		38			POOR	NONE		
02/09/17		8			POOR	NONE		
03/02/18		18			POOR	NONE		

Additional Information 8/15/2011 NO GAUGES

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
09/19/05		0.030 AC	39.1 AC	45 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/11/08		0.030 AC	39.9 AC	47 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
08/15/11		0.020 AC	39.4 AC	45 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.030 AC	39.7 AC	55 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.030 AC	38.5 AC	45 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
05/06/15		0.030 AC	38.2 AC	49 AC			1.50 AC	0.885 AC	CLEAR AC	NONE AC
02/09/17		0.030 AC	37.7 AC	56 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
03/02/18		0.030 AC	38.0 AC	47 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/10/12	0.105% QU
04/01/14	0.109% QU
05/06/15	0.116% QU
02/09/17	0.116% QU
03/02/18	0.105% QU

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/10/12	0.042 AC	0.616 AC
04/01/14	0.038 AC	0.610 AC
05/06/15	0.032 AC	0.423 AC
02/09/17	0.027 AC	0.529 AC
03/02/18	0.030 AC	0.430 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #4
 Location OUTDOOR/GROUND

S/N 17813782
 Mfg. (CENTRAL) MOLONE
 Unit No.

Gallons 102
 KVA 500

High Volt. 13 200
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	31	7	8.1 AC	0.87
08/10/12	35	6	6.0 AC	0.60
04/01/14	31	4	4.1 AC	0.43
05/08/15	41	4	3.2 AC	0.27
02/09/17	13	3	6.1 AC	0.75
03/02/18	23	3	4.8 AC	0.56

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	8	8,848	69,206	23	834	3,572	5	4	ND	874	82,500
08/11/08	7	10,805	70,877	17	874	5,415	4	1	ND	903	88,000
08/15/11	ND	13,439	63,159	19	702	7,602	6	2	ND	729	84,929
08/10/12	3	14,637	65,090	18	705	8,392	8	2	ND	736	88,655
04/01/14	7	11,118	60,039	21	699	6,662	9	2	ND	738	78,557
05/08/15	ND	14,970	64,430	16	679	5,438	5	ND	ND	700	85,538
02/09/17	ND	23,904	82,210	17	576	4,784	8	ND	ND	601	111,499
03/02/18	ND	12,715	48,720	14	515	5,296	7	1	ND	537	67,268

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
09/19/05	ND	ND	ND
08/11/08	ND	ND	ND
08/15/11	ND	ND	ND
08/10/12	ND	ND	ND
04/01/14	ND	ND	ND
05/08/15	ND	ND	ND
02/09/17	ND	ND	ND
03/02/18	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
11/07/86					ND
11/05/92					ND
08/11/08					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source

Customer 1952800 Holley Automotive
 Sub-Name SUB #4

 City Bowling Green, KY
 Unit No.

 Location OUTDOOR/GROUND
 Other EAST

NAMEPLATE DATA
ADDITIONAL EQUIPMENT

Manufacturer	(CENTRAL) MOLONE	Equipment Type	POP TOP XFRMR	Radiators	Yes	Conservator Tank	No
Manufacture Date		Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	17813781	Impedance %	2.20	Water Cooled	No	Bushing Location	Top and Side
KVA Rating	500	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	13.200	Liquid Type	OIL	Top FPV (Inch)	0.50	Hose Length (feet)	20
Low Voltage	240	Gallons	102	Bottom FPV (Inch)		Service Online	No
Weight	3,178	Other Access	TOP INSPECTION PLATE	InsulationType	65C	Power Available	No

VISUAL INSPECTION
FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14		27			FAIR	NONE		
05/06/15		35			POOR	NONE		
02/09/17		8			POOR	NONE		
03/02/18		17			POOR	NONE		

Additional Information 8/10/2012 SIPHONED

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
09/19/05		0.030 AC	38.9 AC	44 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/11/08		0.030 AC	38.7 AC	48 AC			1.50 AC	0.885 AC	CLEAR AC	NONE AC
08/15/11		0.020 AC	38.3 AC	38 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.020 AC	38.1 AC	50 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.020 AC	37.6 AC	43 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
05/06/15		0.020 AC	37.8 AC	45 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
02/09/17		0.020 AC	37.4 AC	56 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
03/02/18		0.030 AC	38.5 AC	46 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/10/12	0.106% QU
04/01/14	0.113% QU
05/06/15	0.119% QU
02/09/17	0.119% QU
03/02/18	0.108% QU

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/10/12	0.048 AC	0.517 AC
04/01/14	0.035 AC	0.686 AC
05/06/15	0.042 AC	0.445 AC
02/09/17	0.030 AC	0.586 AC
03/02/18	0.034 AC	0.479 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #4
 Location OUTDOOR/GROUND

S/N 17813781
 Mfg. (CENTRAL) MOLONE
 Unit No.

Gallons 102
 KVA 500

High Volt. 13,200
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	30	7	7.9 AC	0.85
08/10/12	34	5	5.2 AC	0.53
04/01/14	32	3	2.8 AC	0.30
05/08/15	40	4	3.3 AC	0.28
02/09/17	13	3	6.1 AC	0.75
03/02/18	22	3	4.2 AC	0.49

RECOMMENDATION

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	14	10,370	78,414	25	935	3,732	6	3	ND	983	93,499
08/11/08	17	10,208	73,181	18	963	6,356	5	1	ND	1,004	90,749
08/15/11	ND	11,888	67,587	21	1,009	7,401	6	1	ND	1,037	87,723
08/10/12	1	12,683	71,568	20	1,118	8,514	9	1	ND	1,149	93,914
04/01/14	ND	8,853	59,335	24	986	6,263	7	3	ND	1,020	75,471
05/08/15	ND	12,923	58,971	14	760	4,998	6	ND	ND	780	77,672
02/09/17	ND	20,148	75,853	19	718	4,614	10	ND	ND	745	101,360
03/02/18	ND	12,179	49,354	15	599	4,850	5	ND	ND	620	67,003

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
09/19/05	ND	ND	ND
08/11/08	ND	ND	ND
08/15/11	ND	ND	ND
08/10/12	ND	ND	ND
04/01/14	ND	ND	ND
05/08/15	ND	ND	ND
02/09/17	ND	ND	ND
03/02/18	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
11/07/86					ND
11/03/92					ND
08/11/08					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #4 AUX.
 Location OUTDOOR/GROUND

S/N MS93867DRA
 Mfg. GENERAL ELECTRIC
 Unit No. CABINET

Gallons 410
 KVA 2,500

High Volt. 12,470
 Low Volt. 480

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
11/05/92	18	3	N/A	N/A
01/06/94	23	4	N/A	N/A
02/06/95		2	N/A AC	N/A
08/11/08	39	6	4.7 AC	0.42

RECOMMENDATION RETEST 1 YEAR

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
11/05/92	39	2,397	77,730	20	951	4,101	4	7	ND	1,021	85,249
01/06/94	30	1,301	61,315	18	762	2,564	5	6	ND	821	68,001
02/06/95	31	2,421	70,280	20	855	3,382	4	7	ND	917	77,000
08/11/08	33	657	62,618	22	840	4,572	5	2	ND	902	68,749

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
11/05/92	ND	ND	ND
01/06/94	ND	ND	ND
02/06/95	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
11/05/92					ND
08/11/08					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1852800 Holley Automotive
Sub-Name SUB #4 AUX.

City Bowling Green, KY
Unit No. CABINET

Location OUTDOOR/GROUND
Other SHIPPING / RECEIVING

NAMEPLATE DATA

Manufacturer	GENERAL ELECTRIC	Equipment Type	CABINET XFRMR
Manufacture Date		Transformer Class	OA
Serial No.	M593667DRA	Impedance %	5.55
KVA Rating	2,500	Phase/Cycle	3/60
High Voltage	12,470	Liquid Type	OIL
Low Voltage	480	Gallons	410
Weight	13,800	Other Access	SAMPLE VALVE

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	No
Fans	No	LTC Compartment	No
Water Cooled	No	Bushing Location	Side End
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)		Hose Length (feet)	50
Bottom FPV (Inch)	1.00	Service Online	No
InsulationType	65C	Power Available	No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
01/06/94	NORMAL	23			GOOD	NONE
02/06/95	NORMAL				GOOD	NONE
10/17/03						
08/11/08	NORMAL		49		GOOD	NONE

DATE SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
08/01/82		0.030 AC	34.5 AC	50 AC			0.50 AC	0.880 AC	CLEAR AC	NONE AC
11/05/92		0.040 AC	29.2 QU	43 AC			1.00 AC	0.890 AC	CLEAR AC	NONE AC
01/06/94		0.040 AC	29.9 QU	44 AC			1.00 AC	0.885 AC	CLEAR AC	NONE AC
02/06/95		0.030 AC	30.3 QU	44 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
08/11/08		0.040 AC	29.1 QU	48 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
11/05/92	0.031% UN
01/06/94	ND UN
02/06/95	ND UN

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
11/05/92	0.108 AC	2.500 AC
01/06/94	0.110 AC	2.642 AC
02/06/95	0.154 QU	3.102 QU

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #1

 City Bowling Green, KY
 Unit No.

 Location OUTDOOR/GROUND
 Other

NAMEPLATE DATA
ADDITIONAL EQUIPMENT

Manufacturer	SOLOMON	Equipment Type	CABINET XFRMR	Radiators	Yes	Conservator Tank	No
Manufacture Date		Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	D4081	Impedance %	1.63	Water Cooled	No	Bushing Location	Side End
KVA Rating	225	Phase/Cycle	3/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	12,470	Liquid Type	OIL	Top FPV (Inch)	1 00 Plug	Hose Length (feet)	50
Low Voltage	480	Gallons	116	Bottom FPV (Inch)	1 00 Valve	Service Online	No
Weight	3,260	Other Access	PRESSURE RELIEF DEV.	InsulationType	65C	Power Available	Yes

VISUAL INSPECTION
FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14		31			FAIR	NONE		
05/06/15		43			FAIR	NONE		
02/09/17					POOR	NONE		
03/02/18		21			FAIR	NONE		

Additional Information 8/10/2012 NO GAUGES , SIPHONED

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAY.	VISUAL	SEDIMENT
08/19/05		0 020 AC	40.1 AC	47 AC			1.50 AC	0 880 AC	CLEAR AC	NONE AC
08/11/08		0 020 AC	41.3 AC	44 AC			1.00 AC	0 880 AC	CLEAR AC	NONE AC
08/15/11		0 030 AC	40.7 AC	47 AC			1.50 AC	0 880 AC	CLEAR AC	NONE AC
08/10/12		0 030 AC	39.1 AC	40 AC			1.50 AC	0 880 AC	CLEAR AC	NONE AC
04/01/14		0 030 AC	39.4 AC	45 AC			1.50 AC	0 880 AC	CLEAR AC	NONE AC
05/06/15		0 020 AC	39.6 AC	48 AC			1.50 AC	0 890 AC	CLEAR AC	NONE AC
02/09/17		0 030 AC	39.2 AC	45 AC			2.00 AC	0 890 AC	CLEAR AC	NONE AC
03/02/18		0 030 AC	39.0 AC	52 AC			2.00 AC	0 885 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT *
02/06/95	0 331% AC
08/21/03	0 330% AC
09/19/05	0 337% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
02/06/95	0.148 QU	4.464 UN
08/21/03	0.126 AC	2.842 AC
09/19/05	0.051 AC	1.050 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #1
Location OUTDOOR/GROUND

S/N D4081
Mfg. SOLOMON
Unit No.

Gallons 116
KVA 225
High Volt. 12,470
Low Volt. 480

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	38	9	7.6 AC	0.70
08/10/12	39	11	9.4 AC	0.85
04/01/14	38	6	5.8 AC	0.57
05/06/15	48	8	4.7 AC	0.34
02/09/17	17	3	6.2 AC	0.75
03/02/18	26	4	5.7 AC	0.64

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	24	21,625	68,995	19	406	4,418	7	7	ND	463	93,500
08/11/08	16	23,350	62,447	9	253	7,418	5	2	ND	285	93,500
08/15/11	5	14,271	63,319	7	285	8,073	6	2	ND	305	85,968
08/10/12	18	17,828	59,480	8	214	9,704	7	3	ND	250	87,262
04/01/14	ND	18,330	56,587	6	81	5,319	4	ND	ND	91	80,327
05/06/15	ND	21,937	63,374	6	107	4,401	5	ND	ND	118	89,830
02/09/17	ND	20,248	59,914	7	130	4,957	6	ND	ND	143	85,262
03/02/18	4	20,880	59,347	7	132	4,781	5	4	ND	152	85,140

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME THIS INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
02/06/95	ND	ND	ND
08/21/03	ND	ND	ND
09/19/05	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
08/11/08					ND

COLOR LABEL: Green **CLASS:** NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
 Sub-Name SUB #3

 City Bowling Green, KY
 Unit No.

 Location OUTDOOR/GROUND
 Other NORTH

NAMEPLATE DATA
ADDITIONAL EQUIPMENT

Manufacturer	COOPER	Equipment Type	POP TOP XFRMR	Radiators	Yes	Conservator Tank	No
Manufacture Date	4/1/1997	Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	971039148	Impedance %	2.80	Water Cooled	No	Bushing Location	Top and Side
KVA Rating	333	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	7,200	Liquid Type	OIL	Top FPV (Inch)		Hose Length (feet)	50
Low Voltage	240	Gallons	100	Bottom FPV (Inch)		Service Online	No
Weight	2,200	Other Access	PRESSURE RELIEF DEV	InsulationType	65C	Power Available	Yes

VISUAL INSPECTION
FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14		25			GOOD	NONE		
05/06/15		30			GOOD	NONE		
02/09/17		8			FAIR	NONE		
03/02/18		15			FAIR	NONE		

Additional Information 8/10/2012 SIPHONED

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1818	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
09/19/05		0.030 AC	38.9 AC	42 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
08/11/08		0.030 AC	37.1 AC	48 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
08/15/11		0.020 AC	36.4 AC	43 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.030 AC	35.6 AC	46 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.030 AC	35.2 AC	47 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
05/06/15		0.020 AC	35.0 AC	45 AC			1.00 AC	0.890 AC	CLEAR AC	NONE AC
02/09/17		0.020 AC	34.2 AC	55 AC			1.50 AC	0.880 AC	CLEAR AC	NONE AC
03/02/18		0.030 AC	34.7 AC	45 AC			1.00 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/21/03	0.209% AC
09/19/05	0.215% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/21/03	0.064 AC	1.882 AC
09/19/05	0.033 AC	0.674 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Halley Automotive
 Sub-Name SUB #3
 Location OUTDOOR/GROUND

S/N 971039148
 Mfg. COOPER
 Unit No.

Gallons 100
 KVA 333

High Volt. 7,200
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	31	4	4.6 AC	0.50
08/10/12	34	5	4.7 AC	0.47
04/01/14	30	3	3.0 AC	0.33
05/06/15	35	3	3.0 AC	0.30
02/09/17	13	2	3.7 AC	0.45
03/02/18	20	2	2.7 AC	0.32

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	32	12,555	74,157	9	773	3,220	2	2	ND	818	90,750
08/11/08	37	11,554	72,198	15	752	3,442	2	ND	ND	806	88,000
08/15/11	16	9,477	71,862	16	938	5,416	ND	ND	ND	970	87,725
08/10/12	62	10,827	74,395	18	1,166	7,072	4	ND	ND	1,250	93,544
04/01/14	41	11,843	85,011	18	955	4,677	2	ND	ND	1,016	82,647
05/06/15	44	11,015	69,356	17	1,142	4,337	4	ND	ND	1,207	85,915
02/09/17	42	11,963	69,443	27	1,107	4,617	ND	ND	ND	1,176	87,189
03/02/18	41	11,609	85,080	23	1,025	4,745	5	ND	ND	1,094	82,528

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
08/21/03	ND	ND	ND
09/19/05	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
08/11/08					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #3

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other CENTER

NAMEPLATE DATA

ADDITIONAL EQUIPMENT

Manufacturer	COOPER	Equipment Type	POP TOP XFRMR	Radiators	Yes	Conservator Tank	No
Manufacture Date	4/1/1997	Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	971039149	Impedance %	2.80	Water Cooled	No	Bushing Location	Top and Side
KVA Rating	333	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	7,200	Liquid Type	OIL	Top FPV (Inch)		Hose Length (feet)	50
Low Voltage	240	Gallons	100	Bottom FPV (Inch)		Service Online	No
Weight	2,200	Other Access	PRESSURE RELIEF DEV	InsulationType	65C	Power Available	No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14		26			GOOD	NONE		
05/06/15		33			GOOD	NONE		
02/09/17		8			FAIR	NONE		
03/02/18		18			FAIR	NONE		

Additional Information 8/10/2012 SIPHONED

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
08/11/08		0.020 AC	38.3 AC	47 AC			0 50 AC	0.880 AC	CLEAR AC	NONE AC
08/15/11		0.020 AC	37.6 AC	44 AC			0 50 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.020 AC	36.2 AC	49 AC			0 50 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.020 AC	36.4 AC	48 AC			0 50 AC	0.880 AC	CLEAR AC	NONE AC
05/06/15		0.020 AC	36.0 AC	45 AC			0 50 AC	0.880 AC	CLEAR AC	NONE AC
02/09/17		0.020 AC	37.4 AC	53 AC			0 50 AC	0.880 AC	CLEAR AC	NONE AC
03/02/18		0.020 AC	37.2 AC	48 AC			0 50 AC	0.880 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/21/03	0.233% AC
09/19/05	0.236% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/21/03	0.032 AC	0.766 AC
09/19/05	0.028 AC	0.822 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive

S/N 971039149

Sub-Name SUB #3

Mfg. COOPER

Location OUTDOOR/GROUND

Unit No.

 Gallons 100
KVA 333

 High Volt. 7,200
Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	31	3	2.9 AC	0.31
08/10/12	35	4	3.5 AC	0.35
04/01/14	31	2	2.3 AC	0.25
05/06/15	38	3	2.7 AC	0.25
02/09/17	13	2	4.9 AC	0.60
03/02/18	23	1	1.6 AC	0.19

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	38	11,705	72,710	16	794	2,731	2	3	ND	853	87,999
08/11/08	37	9,387	60,596	10	680	3,537	2	1	ND	730	74,250
08/15/11	33	8,722	76,111	17	1,225	5,632	ND	ND	ND	1,275	91,740
08/10/12	59	10,528	70,532	18	1,148	7,107	4	3	ND	1,232	89,399
04/01/14	55	11,209	81,111	19	1,047	4,808	4	2	ND	1,127	78,255
05/06/15	40	10,620	83,928	15	1,143	4,422	4	2	ND	1,204	80,174
02/09/17	42	14,317	74,532	22	1,112	4,734	4	2	ND	1,182	84,785
03/02/18	41	11,308	68,776	23	1,178	4,989	ND	4	ND	1,246	84,319

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
08/21/03	ND	ND	0.060
09/19/05	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
08/11/08					ND

COLOR LABEL: Green CLASS: NON-PCB

 Results in mg/kg
ND means None Detected
(<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive
Sub-Name SUB #3

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other SOUTH

NAMEPLATE DATA

ADDITIONAL EQUIPMENT

Manufacturer	COOPER	Equipment Type	POP TOP XFRMR	Radiators	Yes	Conservator Tank	No
Manufacture Date	4/1/1987	Transformer Class	OA	Fans	No	LTC Compartment	No
Serial No.	971039147	Impedance %	2.80	Water Cooled	No	Bushing Location	Top and Side
KVA Rating	333	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	7.200	Liquid Type	OIL	Top FPV (Inch)		Hose Length (feet)	50
Low Voltage	240	Gallons	100	Bottom FPV (Inch)		Service Online	No
Weight	2.200	Other Access	PRESSURE RELIEF DEV.	InsulationType	65C	Power Available	No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
04/01/14		26			GOOD	NONE		
05/06/15		24			GOOD	NONE		
02/09/17		8				NONE		
03/02/18		16			FAIR	NONE		

Additional Information 8/15/2011 NO GAUGES

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
08/19/05		0.020 AC	37.3 AC	45 AC			0 50 AC	0 870 AC	CLEAR AC	NONE AC
08/11/08		0.020 AC	39.4 AC	50 AC			0 50 AC	0 870 AC	CLEAR AC	NONE AC
08/15/11		0.020 AC	39.1 AC	44 AC			0 75 AC	0 880 AC	CLEAR AC	NONE AC
08/10/12		0.020 AC	38.7 AC	54 AC			0 50 AC	0 880 AC	CLEAR AC	NONE AC
04/01/14		0.020 AC	38.0 AC	47 AC			0 50 AC	0 880 AC	CLEAR AC	NONE AC
05/06/15		0.020 AC	38.5 AC	47 AC			0 50 AC	0 880 AC	CLEAR AC	NONE AC
02/09/17		AC	38.2 AC	48 AC			0 50 AC	0 880 AC	CLEAR AC	NONE AC
03/02/18		0.020 AC	37.9 AC	52 AC			0 50 AC	0 880 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/21/03	0.218% AC
09/19/05	0.227% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/21/03	0.029 AC	0.608 AC
09/19/05	0.030 AC	0.974 AC

KEY TO ABBREVIATIONS AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive

S/N 971038147

Sub-Name SUB #3

Mfg. COOPER

Location OUTDOOR/GROUND

Unit No.

Gallons 100
KVA 333

High Volt. 7,200
Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	32	3	3.4 AC	0.35
08/10/12	35	3	3.0 AC	0.30
04/01/14	31	2	2.3 AC	0.25
05/06/15	37	3	2.8 AC	0.27
02/09/17	13	2	4.9 AC	0.80
03/02/18	21	1	1.7 AC	0.21

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and liquid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
09/19/05	67	10,786	68,172	35	785	2,618	5	20	13	925	82,501
08/11/08	65	7,183	59,728	30	871	3,600	3	11	9	989	71,500
08/15/11	59	5,906	55,924	38	1,335	5,227	6	17	12	1,467	68,524
08/10/12	93	9,577	69,914	40	1,290	7,207	8	20	9	1,460	88,158
04/01/14	74	11,325	83,612	38	1,184	4,807	9	18	7	1,310	81,054
05/06/15	68	11,662	73,415	35	1,390	4,492	6	16	8	1,523	91,092
02/09/17	98	13,056	77,634	57	1,417	4,813	16	44	12	1,844	97,147
03/02/18	76	10,531	67,093	55	1,317	4,903	10	49	6	1,513	84,040

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
08/21/03	ND	ND	0.042
09/19/05	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
08/11/08					ND

COLOR LABEL: Green **CLASS:** NON-PCB

Results in mg/kg
ND means None Detected
(<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1852800 Holley Automotive
Sub-Name SUB 2

City Bowling Green, KY
Unit No.

Location OUTDOOR/GROUND
Other

NAMEPLATE DATA

ADDITIONAL EQUIPMENT

Manufacturer SOLOMON
Manufacture Date
Serial No. 91822
KVA Rating 1,000
High Voltage 12.470
Low Voltage 280
Weight 7,400

Equipment Type CABINET XFRMR
Transformer Class OA
Impedance % 6.15
Phase/Cycle 3/60
Liquid Type OIL
Gallons 270
Other Access

Radiators Yes
Fans No
Water Cooled No
Oil Pumps No
Top FPV (Inch)
Bottom FPV (Inch) 1.00 Valve
InsulationType 65C

Conservator Tank No
LTC Compartment No
Bushing Location Side Encl.
Breather N2 Blanket
Hose Length (feet) 50
Service Online No
Power Available No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
04/01/14	NORMAL	18	29	0.75	GOOD	NONE
05/06/15	NORMAL	30	33	0.75	GOOD	NONE
02/09/17	NORMAL	12	15	0.50	GOOD	NONE
03/02/18	NORMAL	22	22	1.50	GOOD	NONE

DATE SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
08/15/11		0.020 AC	38.9 AC	46 AC			0.50 AC	0.880 AC	CLEAR AC	NONE AC
08/10/12		0.020 AC	38.3 AC	50 AC			0.75 AC	0.880 AC	CLEAR AC	NONE AC
04/01/14		0.020 AC	37.5 AC	44 AC			0.75 AC	0.890 AC	CLEAR AC	NONE AC
05/06/15		0.020 AC	36.4 AC	47 AC			0.50 AC	0.890 AC	CLEAR AC	NONE AC
02/09/17		0.020 AC	35.0 AC	52 AC			0.50 AC	0.890 AC	CLEAR AC	NONE AC
03/02/18		0.020 AC	36.2 AC	46 AC			0.50 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
08/10/12	0.258% AC
04/01/14	0.258% AC
05/06/15	0.273% AC
02/09/17	0.269% AC
03/02/18	0.248% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
08/10/12	0.023 AC	0.294 AC
04/01/14	0.026 AC	0.349 AC
05/06/15	0.020 AC	0.334 AC
02/09/17	0.020 AC	0.438 AC
03/02/18	0.020 AC	0.362 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.



Customer 1952800 Halley Automotive
Sub-Name SUB 2
Location OUTDOOR/GROUND

S/N 91822
Mfg. SOLOMON
Unit No.

Gallons 270
KVA 1,000

High Volt. 12,470
Low Volt. 280

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
08/15/11	35	8	8.0 AC	0.80
08/10/12	37	9	7.9 AC	0.76
04/01/14	23	3	4.0 AC	0.47
05/06/15	35	9	9.0 AC	0.90
02/09/17	17	4	7.2 AC	0.88
03/02/18	27	2	2.7 AC	0.31

RECOMMENDATION RETEST 1 YEAR

The moisture content continues to be acceptable based on the equipment and fluid type. Continued normal monitoring is indicated.

FURAN ANALYSIS EXPRESSED IN PPM

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
08/15/11	ND	ND	1	ND	ND	1
08/10/12	ND	ND	9	ND	ND	9
04/01/14	ND	ND	1	ND	ND	1
05/06/15	ND	ND	5	ND	ND	5
02/09/17	ND	ND	1	ND	ND	1
03/02/18	ND	ND	1	ND	ND	1

RECOMMENDATION RETEST 1 YEAR

NO DIAGNOSTIC CHANGES ARE NOTED IN FURAN LEVELS SINCE THE PREVIOUS ANALYSIS. THE CELLULOSIC INSULATION APPEARS TO BE IN GOOD CONDITION.

CALCULATED DP 800

EST. LIFE REMAINING 100%

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
08/15/11	130	9,380	68,601	27	787	4,882	3	15	ND	962	83,825
08/10/12	176	12,236	70,883	70	830	6,603	21	97	3	1,197	90,919
04/01/14	182	8,965	65,074	172	972	5,631	49	191	6	1,572	81,242
05/06/15	189	10,311	63,709	127	886	4,691	46	186	5	1,439	80,150
02/09/17	126	15,794	71,215	149	774	4,318	57	221	ND	1,327	92,654
03/02/18	187	9,244	63,408	186	952	6,184	81	307	ND	1,713	80,549

RECOMMENDATION RETEST 1 MONTH

ELEVATED LEVELS OF METHANE, ETHANE, AND ETHYLENE INDICATE AN INTERNAL HOT SPOT IN THE RANGE OF 300-700 DEGREES C. POSSIBLE CAUSES INCLUDE A BAD OR LOOSE INTERNAL CONNECTION OR LOCALIZED OVERHEATING IN THE TAP CHANGER AREA.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
08/15/11	ND	ND	0.036
08/10/12	ND	ND	0.051
04/01/14	ND	ND	0.041
05/06/15	ND	ND	0.045
02/09/17	ND	ND	0.044
03/02/18	ND	ND	0.054

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
08/15/11					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
ND means None Detected
(<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source

Customer 1952800 Holley Automotive
Sub-Name

City Bowling Green, KY
Unit No. E-7812-RIGHT

Location
Other

NAMEPLATE DATA

ADDITIONAL EQUIPMENT

Manufacturer	WESTINGHOUSE	Equipment Type	TRANSFORMER	Radiators	Yes	Conservator Tank	No
Manufacture Date		Transformer Class	OA	Fans	No	LTC Compartment	
Serial No.	82A042634	Impedance %	2.00	Water Cooled		Bushing Location	Top
KVA Rating	500	Phase/Cycle	1/60	Oil Pumps	No	Breather	N2 Blanket
High Voltage	14,400	Liquid Type	OIL	Top FPV (Inch)		Hose Length (feet)	
Low Voltage	240	Gallons	125	Bottom FPV (Inch)		Service Online	No
Weight	5,002	Other Access	PRESSURE RELIEF DEV	InsulationType		Power Available	No

VISUAL INSPECTION

FIELD SERVICE

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS	DATE	SERVICE
12/26/86		65						
08/17/87								
12/16/92	NORMAL	14			GOOD	NONE		
02/06/95					FAIR	NONE		

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
12/26/86		0.030 AC	35.4 AC	45 AC			1.50 AC	0.870 AC	CLEAR AC	NONE AC
12/16/92		0.030 AC	36.2 AC	49 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
02/06/95		0.030 AC	37.1 AC	43 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
12/16/92	0.291% AC
02/06/95	0.276% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
12/26/86	0.200 QU	5.500 UN
12/16/92	0.116 AC	2.740 AC
02/06/95	0.048 AC	1.862 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Halley Automotive
 Sub-Name
 Location

S/N 82A042634
 Mfg. WESTINGHOUSE
 Unit No. E-7812-RIGHT

Gallons 125
 KVA 500

High Volt. 14,400
 Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
12/26/86	65	5	N/A	N/A
12/16/92	14	5	N/A	N/A
02/06/95		3	N/A AC	N/A

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
12/16/92	16	20 053	56,862	10	449	2,347	4	8	ND	487	79,749
02/06/95	5	25 665	58,691	9	210	3,401	6	13	ND	243	88,000

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
12/18/92	ND	ND	ND
02/06/95	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
06/17/87					ND
12/16/92					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
 ND means None Detected
 (<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.



INTELLIGENT TRANSFORMER MANAGEMENT

Date Printed 5/23/2018

TC# 9024

Customer 1952880 Holley Automotive
Sub-NameCity Bowling Green, KY
Unk No. E-7811-MIDDLELocation
Other

NAMEPLATE DATA

Manufacturer	WESTINGHOUSE	Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	OA
Serial No.	82A042633	Impedance %	2.00
KVA Rating	500	Phase/Cycle	1/60
High Voltage	14,400	Liquid Type	OIL
Low Voltage	240	Gallons	125
Weight	5,002	Other Access	PRESSURE RELIEF DEV.

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	
Fans	No	LTC Compartment	
Water Cooled		Bushing Location	Top
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)		Hose Length (feet)	
Bottom FPV (Inch)		Service Online	No
Insulation Type		Power Available	No

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
12/28/88		20				
06/17/87						
12/16/92	NORMAL	13			GOOD	NONE
02/06/95	NORMAL				FAIR	NONE

FIELD SERVICE

DATE	SERVICE
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Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
12/28/88		0.020 AC	36.1 AC	49 AC			1.50 AC	0.870 AC	CLEAR AC	NONE AC
12/16/92		0.020 AC	36.9 AC	49 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC
02/06/95		0.030 AC	38.0 AC	45 AC			1.50 AC	0.890 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
12/16/92	0.287% AC
02/06/95	0.285% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
12/26/86	0.158 QU	3.800 QU
12/16/92	0.166 QU	3.402 QU
02/06/95	0.078 AC	1.302 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952880 Holley Automotive

S/N 82A042633

Sub-Name

Mfg. WESTINGHOUSE

Location

Unit No. E-7811-MIDDLE

Gallons 125
KVA 500

High Volt. 14,400
Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
12/26/86	20	6	N/A	N/A
12/16/92	13	2	N/A	N/A
02/06/95		3	N/A AC	N/A

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
12/16/92	10	14,754	64,846	17	541	2,304	27	3	ND	598	82,502
02/06/95	8	13,152	59,333	17	626	3,837	24	2	ND	677	76,999

RECOMMENDATION RETEST 1 YEAR

B-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
12/16/92	ND	ND	ND
02/06/95	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
06/17/87					ND
12/16/92					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
ND means None Detected
(<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.



INTELLIGENT TRANSFORMER MANAGEMENT

Date Printed 5/23/2018

TC# 9025

Customer 1952800 Holley Automotive
Sub-NameCity Bowling Green, KY
Unit No. E-7810-LEFTLocation
Other

NAMEPLATE DATA

Manufacturer	WESTINGHOUSE	Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	OA
Serial No.	82A042632	Impedance %	2.00
KVA Rating	500	Phase/Cycle	1/60
High Voltage	14,400	Liquid Type	OIL
Low Voltage	240	Gallons	125
Weight	5,002	Other Access	PRESSURE RELIEF DEV.

ADDITIONAL EQUIPMENT

Radiators	Yes	Conservator Tank	No
Fans	No	LTC Compartment	
Water Cooled		Bushing Location	Top
Oil Pumps	No	Breather	N2 Blanket
Top FPV (Inch)		Hose Length (feet)	
Bottom FPV (Inch)		Service Online	No
InsulationType		Power Available	No

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS
12/26/86		20				
06/17/87						
12/16/92	NORMAL	12			FAIR	NONE
02/06/95					FAIR	NONE

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT
12/26/86		0.030 AC	32.0 AC	43 AC			1.00 AC	0.860 AC	CLEAR AC	NONE AC
12/16/92		0.030 AC	36.1 AC	50 AC			1.00 AC	0.880 AC	CLEAR AC	NONE AC
02/06/95		0.020 AC	38.3 AC	44 AC			1.00 AC	0.885 AC	CLEAR AC	NONE AC

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT
12/16/92	0.296% AC
02/06/95	0.278% AC

NOTE - STUDIES SHOW THAT A LEVEL OF 0.3% INHIBITOR IS OPTIMUM FOR PRESERVATION OF IN-SERVICE TRANSFORMER OILS. OILS WITH A LEVEL BELOW 0.08% ARE CONSIDERED TO BE UNINHIBITED.

LIQUID POWER FACTOR

DATE	25 C	100 C
12/16/92	0.366 UN	5.452 UN
02/06/95	0.094 AC	2.054 AC

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE RS - RESAMPLE

NOTE: * After a result indicates that the test or service was performed by an outside source.

Customer 1952800 Holley Automotive

S/N 82A042632

Sub-Name

Mfg. WESTINGHOUSE

Location

Unit No. E-7810-LEFT

Gallons 125
KVA 500

High Volt. 14,400
Low Volt. 240

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG. TEMP	PPM	PCT. SATURATION	MOISTURE BY DRY WEIGHT PCT.
12/26/86	20	1,000	N/A	N/A
12/16/92	12	5	N/A	N/A
02/06/95		4	N/A AC	N/A

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
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GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST.	TOTAL GAS
12/16/92	8	15,432	69,761	15	551	2,208	26	1	ND	599	88,000
02/06/95	4	14,720	58,811	13	486	2,944	20	1	ND	524	76,999

RECOMMENDATION RETEST 1 YEAR

8-THE ANALYSIS OF THIS SAMPLE SHOWS NO SIGNIFICANT INCREASE IN THE COMBUSTIBLE GAS VOLUME. THIS INDICATES NORMAL OPERATION.

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER
12/16/92	ND	ND	ND
02/06/95	ND	ND	ND

RECOMMENDATION RETEST 1 YEAR

THERE HAS BEEN NO DIAGNOSTIC CHANGE SINCE THE PREVIOUS ANALYSIS. THESE DATA INDICATE NORMAL OPERATION.

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
06/17/87					ND
12/16/92					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
ND means None Detected
(<2 mg/kg per ASTM D4059)

NOTE: * After a result indicates that the test or service was performed by an outside source.